8 & 9 Series WHEELCHAIRS

8TRL / J Adult/Junior Self Propelled (127Kg)
9TRL / J Adult/Junior Attendant Propelled (127Kg)
SP100 Adult Self Propelled (112Kg)
AP100 Adult Attendant Propelled (112Kg)

CE

User Guide and Information

www.rhealthcare.co.uk

MANUAL WHEELCHAIRS
GENERAL GUIDE AND SAFETY INFORMATION

Factors considered in selecting a wheelchair apply to both occupants and carers and include:

- method of propulsion
- seating position
- occupant size and weight
- physical ability of occupant and carer (where applicable)
- ease of use
- environment
- safety
- degree of independence
- transportation
- costs

Clinical Assessment teams have a responsibility to provide the wheelchair occupant and carer, where applicable, with a means of achieving effective mobility, bearing in mind all the above considerations.

There are many different types and variations of wheelchairs available today. It may not be possible to satisfy all requirements and environments with one chair for every need of the occupant (and carer) for home, travel or work.

Please read all the information provided Before attempting to use the Wheelchair

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Additional information for Distributors, Service Centres, Assessors and Transportation providers, is contained in the Transportation Guide, which are included in the wheelchair information pack. The Assessment Guide Lines and Technical Information Manual, are available from R Healthcare Customer Services.

1.1 INTRODUCTION

The type of wheelchair, and attachment features, provided will be different according to individual user requirements, and clinical assessment of need. In many cases the result will be a compromise solution.

Some modular wheelchairs can be set up or finely adjusted to suit user needs. Users should contact their approved distributor if they are having problem in using their wheelchair, a simple adjustment or alternative build configuration may help to resolve the problem.

Remploy manual wheelchairs can be divided into two broad categories.

- Attendant Propelled
- Occupant Propelled

This general information section covers safety issues of wheelchair use covering all of these.

Please read carefully together with all other information provided, covering the specific model supplied, which will give particular details of the wheelchair features and construction, methods of operation and correct setting methods.

1.2 GETTING IN AND OUT OF A WHEELCHAIR FACING FORWARDS

For maximum safety, these operations should be carried out with the help of an attendant. The occupant should always try to assist the attendant wherever possible to share the total effort.

Carers should not attempt to lift without help.
If this is not possible a hoist may be required.

Getting into the wheelchair.

Make sure that the brakes are on, flip up the footplates, taking care that the heel support straps (if fitted) are not jammed against the footrest support frame. On some models, footrests may be detached or swung away for easier access.

Note that when footrests are detached, the mounting swivels remain exposed, and care should be taken to avoid the occupant catching these accidentally.

The occupant may be able to help by pushing on the armrests to provide support whilst being lowered into the seat. Finally, push the footplates down, and locate the occupant's feet on them. **see fig 1.**

Getting out of the wheelchair.

Make sure that the brakes are on**,** then flip up the footrests or detach them. The occupant should place a hand on each armrest, bend slightly forward and place both feet well back and firmly on the ground, then push upwards to assist the carer.

1.3 SIDE TRANSFER

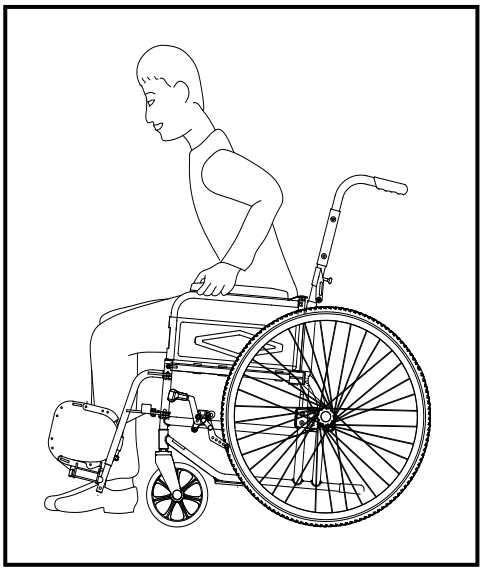
When the wheelchair armrest is removed, it will allow sideways entry to the chair and vice versa, from another chair or car seat. **see fig 2.** Physically active Independent users with upper body and arm strength should eventually develop skill to carry out this manoeuvre without help. However, it is advisable that an attendant should be available if assistance becomes necessary.

Make sure the brakes are on, or that the wheelchair is prevented from moving, It is easier to transfer when flip up footrest assemblies are swung back out of the way, or removed so as not to interfere with the legs. Fixed frame wheelchairs with foot bars, which do not have protruding brackets and footplates, allow side transfer without the need for footrest removal. Feet should be firmly on the ground and not on the footrest. The safest way to transfer is to bend slightly forward.

DO NOT ATTEMPT SIDE TRANSFER ON SLIPPERY OR UNEVEN FLOORS

If there is a gap between the two seat surfaces, it may help to slide along a smooth transfer board, or to use some other lever point such as a car hand grip for additional support whilst manoeuvring from one seat to the other.

Figure 1 - Getting in/out of the wheelchair



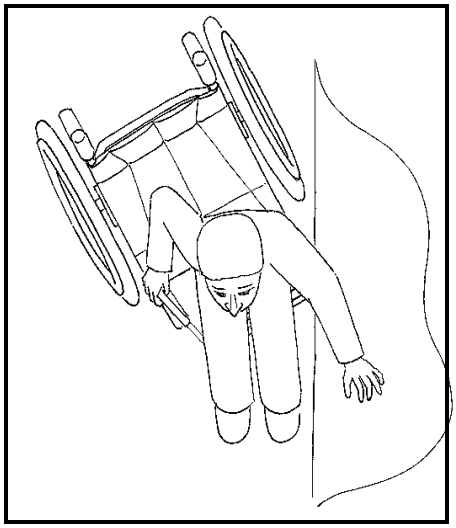
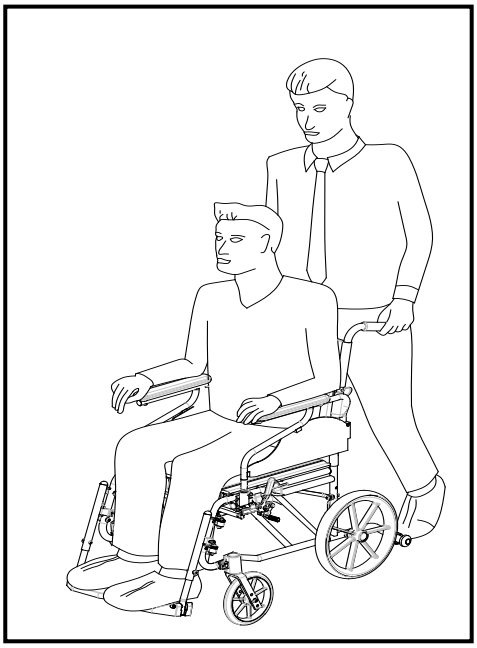
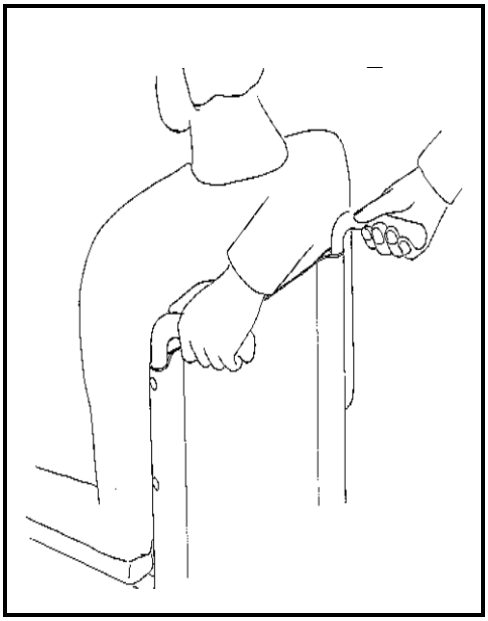


Figure 2 - Side Transfer

Figure 3 - Maintain a firm grip on the push handles





4 - Attendant Control

1.4 BRAKES

Hand brakes are provided for preventing wheel movement when parked, particularly on a slope, or during occupant transfer to and from the wheelchair. The action of a brake shoe pressing on the tyre makes correct inflation pressure important, see section 1.5.

Cable operated hub brakes are an option available for mounting on the push handles to allow the attendant to control the chair without having to reach down for the hand brake handle. These may also provide the attendant with a means of controlling the speed of a wheelchair when going downhill, and are a safety improvement on slopes and undulating terrain, as described in Technical Information Manual (Part B). Operating the wheelchair in this way however, demands that the attendant is skilled in the controlling operation, as a sudden change in direction will result if one wheel is retarded in advance of the other.

1.5 PUSHING TECHNIQUES

Pushing a wheelchair with a helpful occupant can be an enjoyment for both people involved provided that there is mutual confidence and understanding.

When first planning a trip, the pusher should check the distance and terrain to be covered, bearing in mind that a slope going out is a hill coming back. A combination of slope and camber is common in many areas. Try the chair out on typical surface conditions nearby, and practice manoeuvres likely to be encountered on a longer trip.

The pusher should be familiar with the operation of the wheelchair, remembering to put the brakes on and steady the chair before the occupant gets in and out. Where applicable, detachable features such as push handles and armrests should be checked for security, before setting out on a journey. The occupant should not be rushed during transferring in and out of the chair.

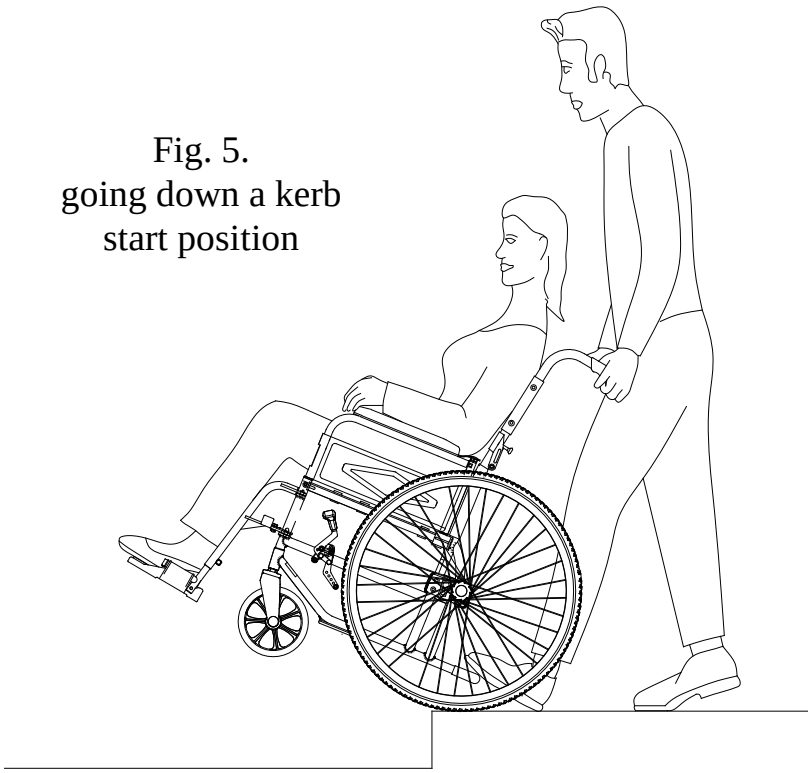
Before setting off, the pusher should make sure that the occupant is comfortable and that clothes, rugs, covers etc do not catch in the wheels or interfere with the general workings of the wheelchair.

The pusher should walk at a sensible speed, and tell the occupant before changing position, tipping the chair or manoeuvring, also paying attention to the surface conditions and avoiding uneven or soft ground wherever possible.

The pusher should always maintain a firm grip on the push handles. The chair should not be jolted or jarred, or rocked like a pram. **see figs 3 & 4.**

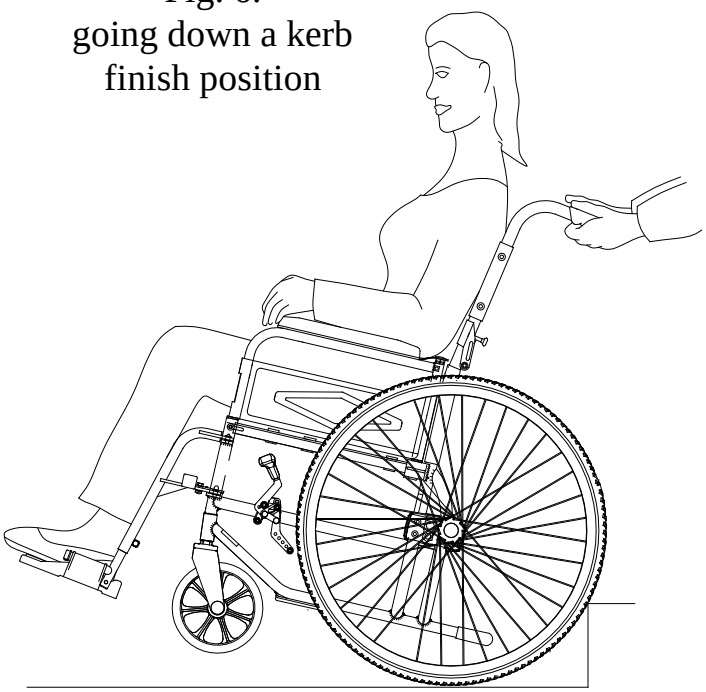
Shopping bags or other additional heavy loads should not be carried in a wheelchair unless specifically designed for the purpose. This particularly applies to hanging items over the push handles, which can overload the chair and affect stability resulting in injury if the occupant tips out of the chair when it is left unattended momentarily.

Fig. 5.
going down a kerb
start position



make sure that the front end of the chair is lowered slowly to the floor, and that the castors are pointing to the rear.

Fig. 6.
going down a kerb
finish position



castors with small wheels, are more liable to dig in, than large wheels, and require extra care in use.

1.6 KERBS

Negotiating a kerb.
The methods described here involve an attendant controlling the operation. Active users adopt balancing techniques carry out kerb manoeuvres independently, but methods will vary according to the setting of the chair, the physical strength of the user and skills acquired through training and practice with wheelchair experts. See section 1.6.

Going down a kerb:
The chair castors should be taken to the edge of the kerb. The pusher should hold the chair handles firmly, pressing down on the tipping lever and at the same time tilting the chair back. **see fig 5.**

The rear wheels can then be taken to the kerb edge and the foot removed from the tipping lever. The chair is then lowered down the kerb on its rear wheels, with the castor wheels facing rearwards, *this prevents them jamming up momentarily as the chair starts to move*, before pivoting the chair gently to the ground, to face direction of travel and then pushing forward.

Note: The chair must not be tipped forward or the occupant may fall out. When stabilisers have been fitted, this operation is more difficult to control, and extra care should be taken.

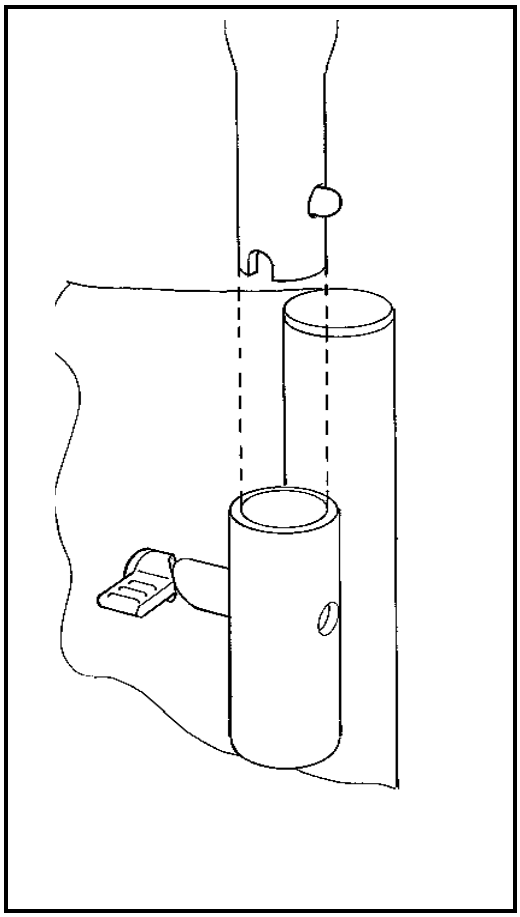
Going up a kerb. First method.
The chair footplates, or occupant feet if longer, should be taken to just in front of the kerb edge. The pusher should hold the chair handles firmly, pressing down on the tipping lever, tilting the chair backwards using body weight leverage, bringing chair forward till the back wheels touch the kerb.

The front castors wheels can then be lowered down onto the path, making sure that the wheels are facing rearwards. With the push handles held firmly the attendant should now lift and push the chair.

Going up a kerb. Second method.
The chair should be turned round so that the back wheels are against the kerb and the attendant should hold the pushing handles firmly and tip the chair backwards.

Using body weight as leverage the attendant should then pull the chair off the kerb and up onto the pavement, making sure, as above that the castor wheels are facing rearwards .

The chair may then be pivoted to face the direction of travel and pushed forward.



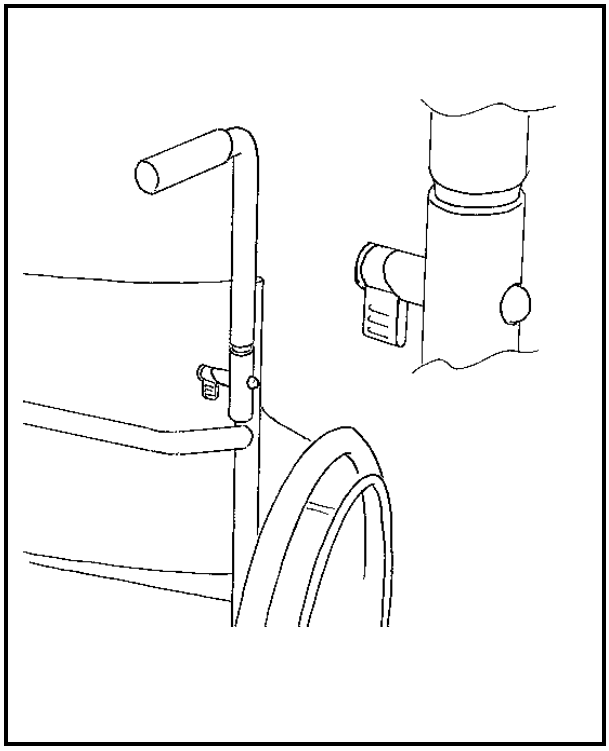


Figure - 7
Ensure that push handle locks are fully engaged before using

Figure - 8
Detachable push handles must be inserted correctly

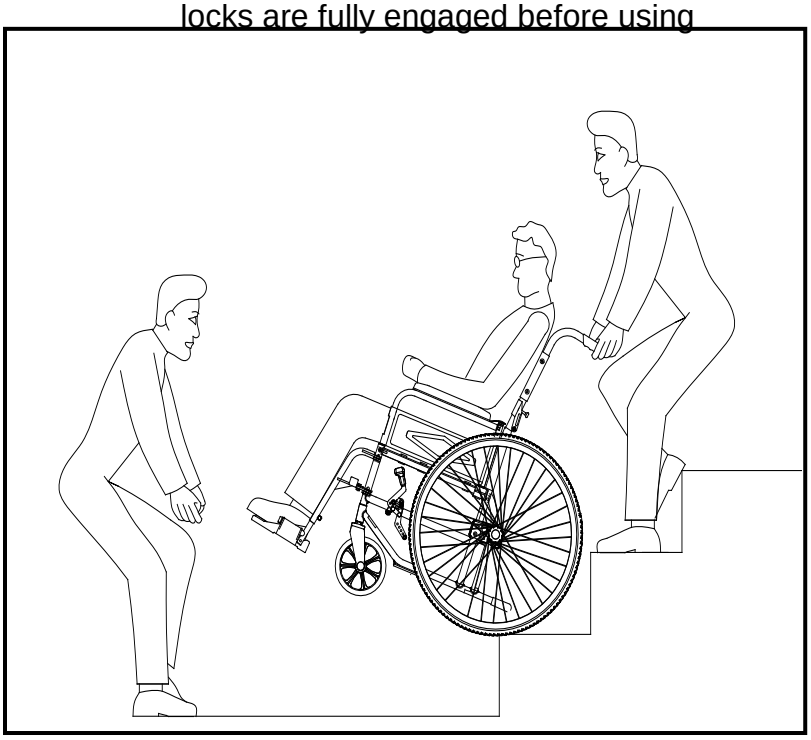


Figure - 9
Going down/up a flight of steps

1.7 HANDLING & STABILITY ON STEPS & SLOPES

ENSURE THAT PUSH HANDLE LOCKS ARE ENGAGED BEFORE USE

A little forward journey planning can eliminate difficult manoeuvres such as obstacles or steps. Modern public buildings should provide permanent wheelchair ramps, with a practical slope angle, built according to regulations, for safe access.

Technical Test data on static stability of wheelchairs should be seen as a tool for comparison. Data does not convey actual feel of the wheelchair in the intended environment. Initial supervised user training and assessment by a rehabilitation professional, with the wheelchair in the intended usage environment is recommended. Users should ensure that they are confident with regard to this aspect of use.

An important factor in considering accessibility and slopes is the effort demanded from the occupant or attendant using the chair. Pushing up a steep slope, which extends over a distance, may create a need to stop and rest, which in turn demands additional and undesirable effort to start back upwards again. Stopping a wheelchair on a steep downward slope also demands effort and control, and surface conditions need to be taken into account when deciding what outdoor route to take. Manoeuvres, which demand over exertion, may create risk of injury to the user and should be avoided. However, if in temporary difficulty, wheelchair users should not hesitate in asking for assistance from people nearby, someone will usually be happy to help.

Modern buildings should have slopes built to a required standard angle, but this is not the case with all access areas. Learning the geography of an area is important. As an all round guide, a maximum safe slope of 8 degrees is our recommendation for the Remploy range of manually propelled wheelchairs. However this recommendation may need to be changed if the wheelchair has attachments added to it, such as an elevating legrest or carry bag, which adversely affects stability. Such changes to the chair specification may have a critical effect, and they require re-assessment by a rehabilitation professional.

SAFE SLOPE OF 8 DEGREES FOR MANUAL WHEELCHAIRS

Where possible, the hazard of negotiating steps should be avoided. Many falls and injuries to both occupant and helper can occur when inexperienced people are carrying out this operation, and if users or carers are concerned about a particular hazard in the usage environment, which they must regularly overcome, they should consult their wheelchair rehabilitation service, or community services department., as appropriate.
There may still be occasions when steps must be negotiated. **see figs 7, 8 & 9.**

In the event of the chair having detachable pushing handles, these should be checked for security in the locked in position before attempting this manoeuvre. Stabilisers may require removal if they interfere with the chair balance angle on a flight of steps. This should first be checked out with an unoccupied chair.

Two attendants at least are required for this operation. The attendant supporting the main load should grip the chair at the push handles, and repeat the procedure as section 2.6 for getting down a kerb at each step, the second attendant at the front will be required to guiding the footrest area, and provide reassurance to the occupant. A third person could act as guide for the chair team if the steps are high. Reverse this procedure for going up a flight of steps, with the attendant supporting the main load at the push handles pulling, and the second attendant at the front guiding the chair using the corner of each side frame.

Specialist training for very experienced users to negotiate a flight of stairs independently is available, but this is beyond the context of this guide.

1.8 Seatbelts (also posture belts)

The fitting of these should be considered in all circumstances where the chair is used outdoors, over a sloping surface or kerbs. Belts normally secure the occupant by means of a quick release buckle in the centre. In cases where the seatbelt is part of the postural/ clinically assessed needs, provision of a seatbelt will be covered by a clinical assessment.

A basic security seat belt may become required after a period of use, if the environment or method of use changes, or where the occupant feels a need for greater security in the wheelchair. These can be fitted retrospectively by a fully trained and competent technician, but if unable to utilise any of these instructions, contact either your NHS rehabilitation engineer or the manufacturer of the wheelchair.

A correctly fitted posture belt should fit over a users pelvis at approximately 45 degrees from the anchor without obstruction from any part of the wheelchair (e.g. skirt guard or armrest). The posture belt should be adjusted so as to fit snugly around the users pelvis to provide an appropriate sitting position. The adjustment of the belt must be carried out by a competent person who is able to assess the clients needs and frequency of checking of the belt adjustment. Future reviews of an individuals needs should include consideration of the appropriateness of the posture belt and its method of adjustment, fastening and release especially where a users' or carers' capabilities change over time.

Lengthening or shortening, is affected by slackening and adjusting the webbing, as it passes through the male part of the fastener until the desired fit is obtained. When adjusted ensure the webbing is tightened, the buckle is located centrally, and the surplus webbing is secured by the tri-glide provided.

Inspection and maintenance of posture belts and their fittings should be included within the planned preventative maintenance programme for the wheelchair.

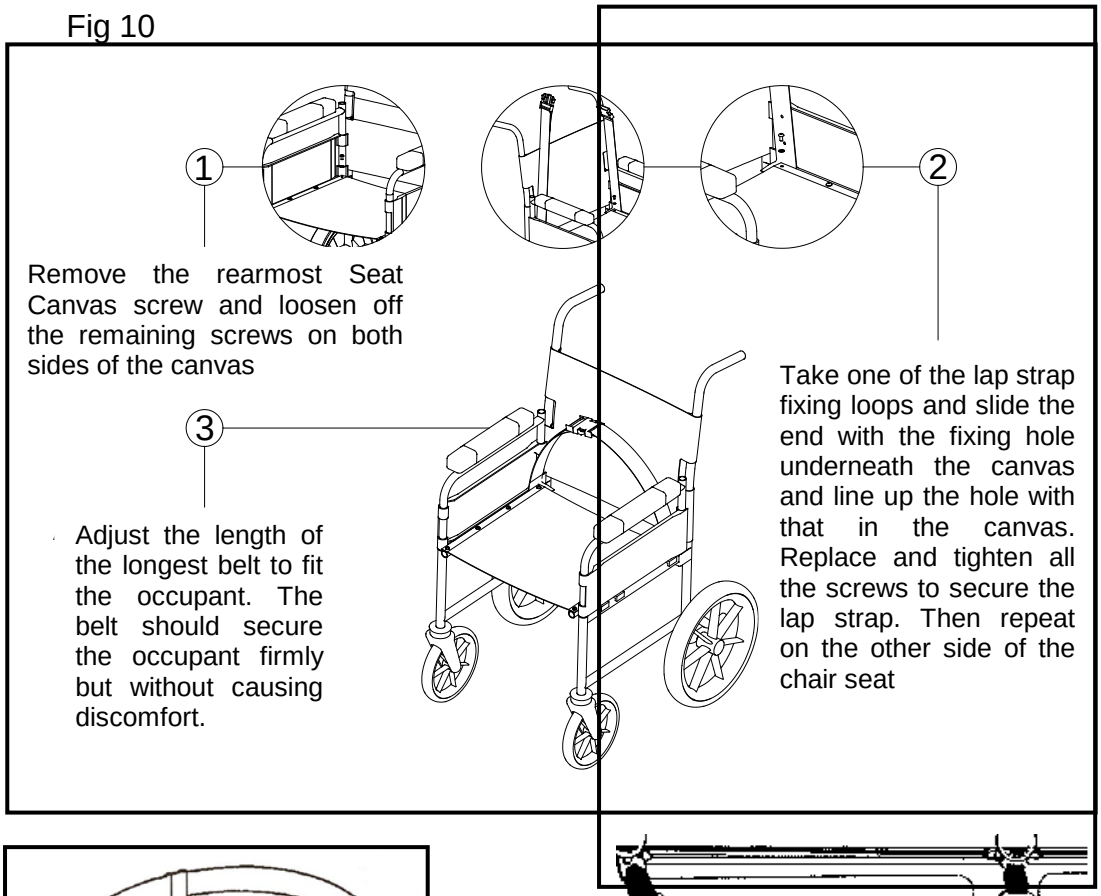
Wheelchair seatbelts are not tested to meet the crash test standards required for occupant restraint in a vehicle, but we advise that they should remain in position during a journey to provide occupant security, and support during normal traffic movements of sideways cornering and speed changes.

Transportation, crash tested restraints for both wheelchair and occupant are part of the actual vehicle equipment, and must be secured to the vehicle itself, as shown in Fig.12 See section 2.10 of this General Guide for more details.

N.B. The loop must be fitted in such a way that the eyelet is underneath, and the loop uppermost, to prevent possible contact with the wheel (Fig 10 ②). The belt must be fitted in one piece, go around the client and must pass behind the push handle tubes of the wheelchair.

Clean if required, using a damp cloth with a small amount of washing up liquid. Rinse with a clean damp cloth. All of our belts have flame retardent properties.

Fig 10


1
2
3
Remove the rearmost Seat Canvas screw and loosen off the remaining screws on both sides of the canvas
Take one of the lap strap fixing loops and slide the end with the fixing hole underneath the canvas and line up the hole with that in the canvas. Replace and tighten all the screws to secure the lap strap. Then repeat on the other side of the chair seat
Adjust the length of the longest belt to fit the occupant. The belt should secure the occupant firmly but without causing discomfort.

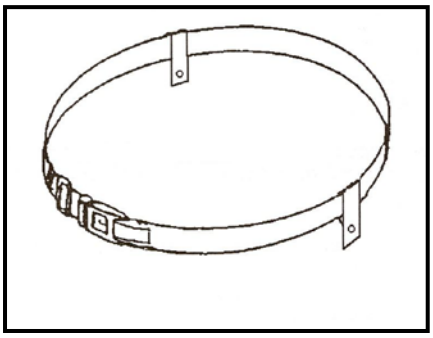


Fig 11

Belt with twin webbing loops shown in the correct orientation

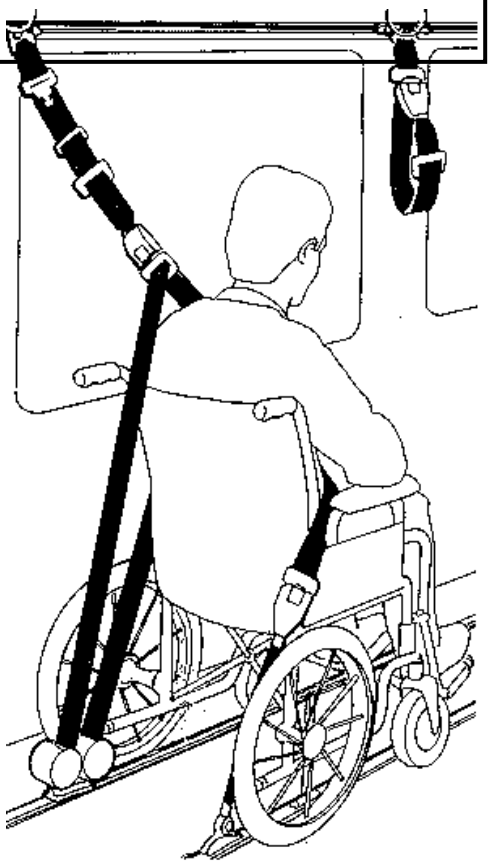


Fig 12

WARNING – DO NOT disassemble, shorten cut or drill this retaining belt, it could seriously compromise the belts integrity and invalidate any manufacturers warranty.

1.9 OCCUPANT CONTROLLED MOBILITY

Handrims

These are provided for the occupant to grip and push round to propel the wheels. Best results will be obtained by a long pushing stroke, which gives a continuous and smooth forward motion. Many users find that gripping across the tyre and handrim at the same time gives better control. We recommend that when operating in this way, wheelchair gloves are worn.

Users with gripping difficulties may find larger section or Capstan types, with easy grip features, more practical.

When using a handrim to turn a chair round in a tight space, push one wheel forward, whilst pulling the other wheel backwards. Always make sure when carrying out this manoeuvre, that there are no obstructions or bystanders in the turning space required.

Balance Training

Physically active, independent people require wheelchairs, which allow them to safely negotiate kerbs and achieve efficient control and manoeuvrability.

It can be hazardous for an occupant to attempt wheelie positions on wheelchairs, which are stable above 10 degrees rearwards static stability, as physical effort needed to manoeuvre and pull a wheelie can be excessive, consequently increasing the risk of accidentally tipping over backwards.

Maximum efficiency of hand propulsion occurs when occupant centre of gravity and wheel centre coincide, and is dependent on the occupant shape and size. Physically active people should have wheelchairs with fine wheel position balance settings, i.e. below 10 degrees rearward stability. These chairs should have rear stabilisers when supplied to inexperienced users, allowing the user to practice balancing techniques with the reassurance that the chair will not accidentally tip over backwards.

During training, the Therapist, or Training Supervisor can therefore build up the confidence of the occupant in stages, by initially setting the wheelchair up in a safe balance position, with the stabilisers acting positively, and progressing gradually towards optimum performance settings, with the stabilisers only acting as a back up.

Once satisfied that the occupant has developed the full range of wheelchair skills, and provided that the medical condition is not compromised, the therapist can authorise removal of the stabilisers, and the occupant then takes full responsibility and control of the wheelchair.

STABILISERS ARE FOR OCCUPANT SAFETY
THEY SHOULD NOT BE REMOVED UNTIL THE USER IS ABLE TO DEAL WITH BACKWARD FALLS AND TIP OUTS.

If stabilisers are removed for ascending or descending a flight of steps additional carers and handlers should be present, and they should be refitted when the manoeuvre has been completed.

Outdoor Safety Hints

Most pavements slope slightly towards the kerb and the wheelchair may have a tendency to pull towards the road. Occupant controlled Active User wheelchairs with cambered wheel setting reduce this tendency.

The fitting of polyurethane tyres eliminates punctures, and provides reassurance of not being stranded some distance from a service centre, but the use of these tyres imposes a harder ride and the wheels must be checked more frequently, to ensure that there is no deterioration of spoke tension and security. Polyurethane tyres have slightly less grip than pneumatic tyres, therefore, self propelled chairs fitted with polyurethane tyres are also fitted with a high friction brake shoe grip.

When out at night, ensure that both you and your wheelchair are visible, consider both clothing, and light reflective trim features.

1.10 TRANSPORTATION

Wherever possible it is recommended that wheelchair occupants transfer to a vehicle seat during a journey, with the wheelchair securely stored separately in a purpose made storage area.

Stowing the wheelchair in a car boot

The folded chair should be placed close to the car boot with armrests, footrests and other removable parts detached to split total weight into component form. Wheelchairs with detachable wheels reduce the weight for lifting. The person stowing the chair should grip convenient fixed parts of the chair, and lift keeping the back straight, bending from the hips and knees. If in any doubt about handling the weight, assistance should be sought.

If stowing proves difficult due to weight or space limitations, a compact folding wheelchair such as the Remploy Stowaway may provide a practical and additional alternative for transit purposes and occasional use

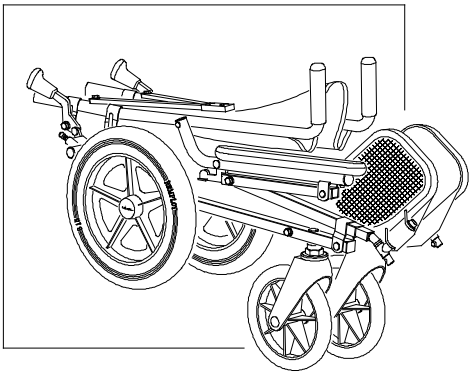


Figure 12 Remploy Stowaway

Car Driver Information

Physically active wheelchair users can drive cars and store the wheelchair in the car independently, with a lot of practice. Training at specialist driving centres is recommended. Two door cars provide the greatest access space. Gaining entry to the car first involves side transfer as section 3. When carrying this manoeuvre a wheelchair users should chose a position where there is no risk of interference from other traffic.

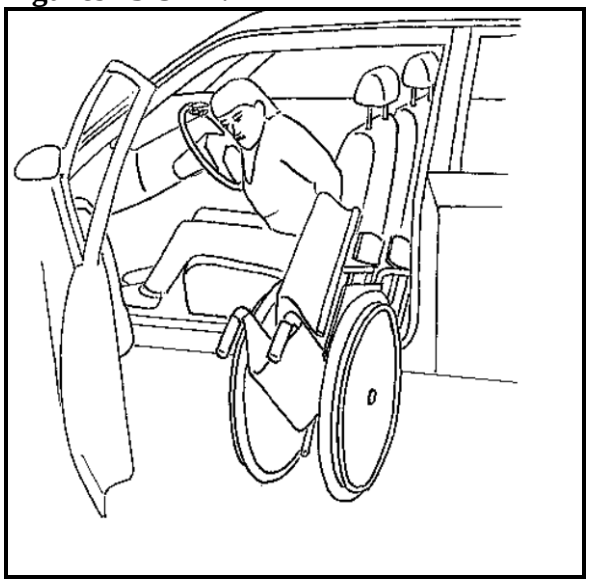
The stored wheelchair requires locating not only so that the driver can reach it, but also to remain safely secured during the journey.

With sideways folding wheelchairs the driver should pull the folded wheelchair into the vehicle into space behind driver or passenger seat. **see figs 13 &14.**

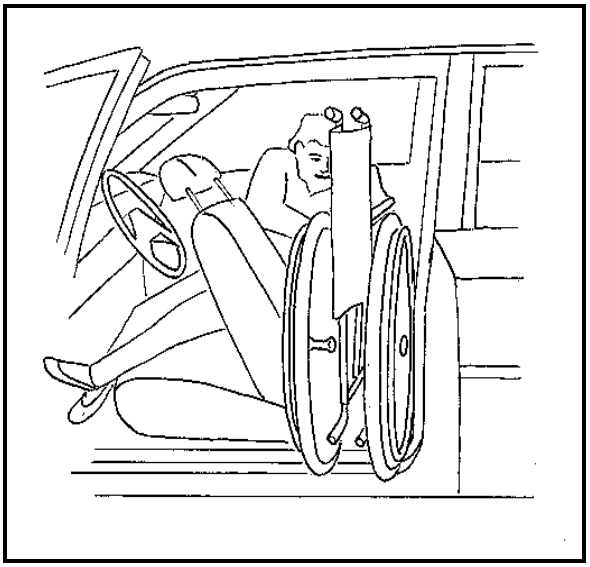
Fixed frame wheelchairs, with quickly detachable wheels can be disassembled once the driver has transferred into the car. The parts then being stored safely within the vehicle.

It is recommended that wheelchairs stored on the front passenger seat are secured using the car seat belt through the frame. A wheel bag may be useful for long journeys or for keeping dirt away from the car seating area. When there is another able bodied passenger present, the storing options as section 9.1 are recommended.

Figures 13 & 14.



A Sideways Folding wheelchair can be stored behind the front seat.



Guidelines for Wheelchair & Occupant Transportation in Vehicles
This information is given in order to reduce the risk of bad practice. It is based on current available knowledge. Wheelchair users and transport operators have a responsibility to ensure that safety measures take account the needs of wheelchair occupants and other passengers to minimise the risks involved for each individual situation. Vehicles transporting wheelchair occupants should have safe, secure wheelchair access, transport operators should recognise this. Available publications are MDD Report No 92/07, and Dept of Transport Code of Practice VSE 87/1.

Public Transport
Wheelchair users who choose to travel in a local bus or public service vehicle should recognise that this involves risk, and a complexity of related issues. The user has a responsibility to make the decision of how to travel carefully. Pre journey planning will avoid difficult access situations, which could be encountered later, when it is too late to do anything about it. In busy, congested areas, users will require skill to avoid collisions with other passengers, when approaching and boarding the vehicle. Wheelchair brakes may not hold a chair and occupant stable against inertia forces of normal traffic conditions, such as cornering or coming to a halt, and wheelchairs in vehicles should be prevented from moving by other means. Dept of Transport approved designated wheelchair areas in low floor buses with support pillars and hand rails at wheelchair height are the most suitable. Users are advised to check availability of wheelchair facilities with the transport vehicle operator, and note time schedules.

Specialised Transport for Wheelchair Occupants.
These vehicles should be fitted with approved restraint systems. Dept of Transport approved taxis for individuals are available, but users with neck problems are advised to check that there is adequate headroom.
Restraint systems for minibuses range from wheelchair tie downs, to more compact foldaway devices. Installers and operators of vehicles with restraint systems must be trained in their correct use by the restraint manufacturer, or approved mobility specialist. The CTA can provide useful advice. Remploy are participating in the creation of new safety standards in this area through membership of BSTA, in co-operation with the Dept of Transport & B.S I.

The wheelchair must be secured to the floor by a restraint system, preferably in line with direction of travel. see **Fig15**. The wheelchair should not be occupied by more than one person. Fittings such as trays, should be stowed separately.
Wheelchairs used for transportation of occupants in vehicles should have a full height backrest of at least 415 mm for adults, head supports are recommended.

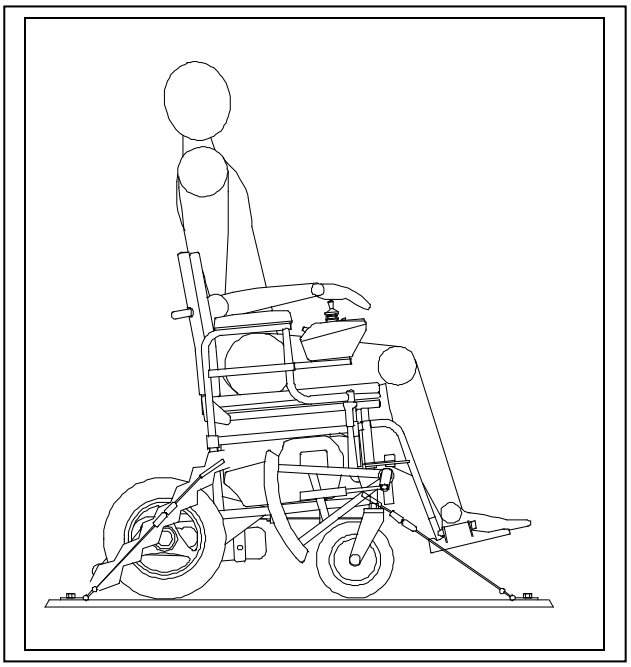


Fig 15
Side view of Remploy Powerider tied down to floor of a vehicle using webbing restraints. Note that separate occupant crash tested restraint is not shown in this view.

Wheelchair Seat Belts and Posture Belts are not crash tested restraints, although they help keep an occupant in a preferred position during normal vehicle motion. To meet crash safety standards, wheelchair and occupant must be secured to the vehicle independently. The occupant restraint should be secured directly to the vehicle at a point above shoulder height. No component of a wheelchair restraint should pass through the wheels. Wheelchair restraints should secure the wheelchair in such a manner that they cannot become free if chair components deform, or if one or more tyres deflate. Under no circumstances should wheelchairs be modified or strained to allow installation of clamps or fittings.

1.11 FIRE PRECAUTIONS

DISABLED PERSONS ARE AT GREATER RISK THAN OTHERS IN THE EVENT OF A FIRE. THE ENVIRONMENT IN WHICH A WHEELCHAIR IS USED SHOULD INCORPORATE SAFETY PRECAUTIONS TO MINIMISE FIRE RISK TO WHEELCHAIR OCCUPANTS

When using the chair, both indoors and outside, always take precautions against fire risks. Avoid smoking, and do not park the wheelchair against an open fire, or intense heat source. Bear in mind that the temperatures reached in a hatchback car on a hot day can cause stored wheelchair component parts to become too hot to handle. When parking, the pusher should position the chair so that the occupant can see and communicate as well as possible. In buildings check that fire exits and procedures are understood.

1.12 GENERAL PRECAUTIONS & INFORMATION

Warranty

R Healthcare guarantees the products supplied to be free from manufacturing defects, and will replace components where necessary free of charge, for a period of 24 months from the date of purchase. This guarantee is subject to the condition that the product has been used, adjusted and maintained in accordance with the user and maintenance instructions supplied by R Healthcare.

UNAUTHORISED WHEELCHAIR MODIFICATIONS MAKE THIS WARRANTY VOID.
REMPLOY ARE NOT RESPONSIBLE FOR ANY ACCIDENT RESULTING FROM SUCH UNAUTHORISED MODIFICATIONS.

This does not affect your statutory rights. A more complete warranty statement is available on request from Authorised Distributor or Disablement Service Centre.

Service

Service Records should be completed by the Authorised Distributor Servicing Department and retained by the user as a reference. Service checks should be carried out by the Authorised Distributor at the recommended interval specified on the Service Record. Batch code and serial numbers are essential for the specification of spare parts. If in doubt, your Authorised Dealer or Rehabilitation Specialist will be able to provide help and professional advice on correct and safe use of wheelchairs. There are also many national and local organisations, which will be pleased to provide help and advice for wheelchair users.

All Remploy wheelchairs are designed with the needs of disabled people in mind. We hope that our wheelchairs provide their users with the reliability, freedom or independence they need for a more improved lifestyle.

Remploy Healthcare Group has a policy of constant product improvement and reserves the right to change specifications without prior notice.

This guide contains information of a general nature. All models and attachments have specific features and will have additional information provided showing correct operation method.

1.13 LOOKING AFTER YOUR WHEELCHAIR - GENERAL CARE AND MAINTENANCE

READ ALL INFORMATION PROVIDED BEFORE ATTEMPTING TO USE

Users should not attempt major repairs or modifications. Approved Distributors have full Service Information and are able to advise if the chair becomes damaged, requiring major part replacement, or refitting. If in any doubt about service requirements, contact the Approved Distributor The Remploy Customer Services Dept is also available for more information The Service Record included with this Information Guide, has details of model references to be quoted when Service Information is requested.

Frequency of distributor service maintenance depends on usage level. We recommend that chairs are checked by the distributor at assessed intervals, according to the level of use and usage environment. Warranty can be affected if a wheelchair is not adequately maintained.

Users should note that wheelchairs retain appearance if looked after and cleaned regularly, referring to the list below for routine maintenance and safety checks, which they are responsible for.

Information received from upholstery manufacturer

The fabric used for wheelchair upholstery is easily cleaned in-situ. However, as there are some substances which may affect the material, careful attention to REGULAR cleaning will not only prolong its life but will ensure that its appearance is maintained.

Resistance to stains and chemicals

The upholstery is resistant to most mild acids, alkalis and household stains. Some substances such as ball-point pen ink, lipstick, newsprint and food colourings may be absorbed by the vinyl and cause permanent staining. This can often be minimised by immediate cleaning with a damp, soapy cloth or sponge

Cleaning

To maintain its appearance, the fabric should be cleaned REGULARLY to remove fatty substances in soiling, which may reduce its service life. Light soiling can be removed by adding a small amount of washing up liquid to some warm water and then applying to the fabric with a cloth. Rinse off with clean water before allowing to dry. If need be, a Mild solution of antiseptic can be applied to the fabric.

Do not use

Chemical bleaching materials, abrasive cleaners, wax polishes or aerosol spray polishes. The use of these substances is likely to be harmful to PVC laminates and repeated use can result in the removal of plasticiser from the PVC compound which will result in hardening and subsequent cracking of the material's surface.

1.14 SERVICE CHECK LIST

Brakes	The brake should hold the chair on a ramp angle of approx. 10 degrees. Try the chair on a slope or ramp, which you may use. If necessary, have the brake is readjusted.
Wheels	Check general condition, free running and clearance in hubs, wheel wobble of 3mm measured at rim is acceptable, excessive movement is an indication of wear. Chairs fitted with puncture free tyres in particular will require frequent checks on spoke security, and any spoke looseness or other fault should be brought to the attention of the Approved Distributor.
Tyres	Ensure correct tyre pressure, and tread condition. Valves are Schrader (as cars), pressure is 45 psi (3 Bar or 300 Kilo pascals). To avoid risk of over inflation, we do not recommend use of high pressure airlines. Badly worn tyres should be replaced.
Handrims	Check security of fixing, and damage to surface which could cause cut fingers
Moving Parts	Occasional lubrication of sliding parts and pivots. We recommend the use of a none toxic lubricant is used eg Superlube Plus (from Lubrication Services) which is FDA approved for food use, will allow easy operation.
Upholstery	The upholstery should be wiped with a damp cloth. Marks can be removed using a mild detergent. Pressure washing is not recommended. Damage should be repaired before it causes problems. A slight catch in the upholstery may result in a longer tear if not dealt with when it first occurs.
Frame and Fittings	Paint work can be protected using a proprietary car wax polish. Check that all detachable parts latch in correctly and positively, particularly push handles, footrests, armrests and stabilisers where appropriate.
Handgrips	Ensure that the Handgrips are secure. If grips are loose or damaged the wheelchair is unsafe and the grips must be replaced. Replacement grips and method of fitting must be to Remploy approved specification.

1.15 PRESERVATION & STORAGE

Where ever possible as a minimum store the wheelchair in garage type conditions, away from wet or damp areas.

During the course of general use, the wheelchair may become wet, due to rain and such events. When practical the wheelchair should be wiped down with a dry cloth, this is to reduce the risk of corrosion.

Where wheelchairs are stored in the back of cars and similar transportation vehicles, there are occasions especially in hotter climatic conditions such as summer, it is advisable to cover the wheelchair with a suitable cover. This will reduce the risk of the wheel becoming hot, having an effect on user or carer handling the chair out of the vehicle.

When a doubt exists, where the wheelchair has suffered constant miss use of storage, the wheelchair should be removed from the client, and disposed of.

Positive Momentum

TECHNICAL INFORMATION CE

RANGE **8TRL** MAUNAL WHEELCHAIRS

OCCUPANT WEIGHT RANGE 50Kg TO 127Kg

KG

INFORMATION GIVEN COVERS ALL OPTIONS SEE REMPLOY RECOMENDED BUILD CHART SUGGESTED COMBINATIONS OF FEATURES TO MEET A RANGE OF SPECIFIC APPLICATIONS

SEATING AREA DIMENSIONS

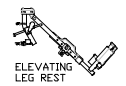
RANGE AND SEAT WIDTH REFERENCE NUMBER. COVERING ALL GENERIC CONFIGURATIONS	SERVICE FRAME REFERENCE (inch)		ISO 7176 EFFECTIVE MEASUREMENTS (mm)	
	WIDTH	DEPTH	WIDTH	DEPTH
8TRLJ	13	15	365	415
8TRLJ	15	16	390	440
8TRLJ	16	16	440	440
8TRL	17	17	465	465
8TRL	18	17	490	465

SEAT FRONT EDGE TO GROUND HEIGHT

CONFIG.	SERVICE (FRAME) REFERENCE (inch)	EFFECTIVE (CENTRE) MEASUREMENTS (mm)
8TRLJ	19	450 including sag
8TRL	19	450 including sag

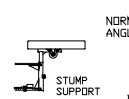
BACKREST HEIGHT - 445mm
MEASURED FROM SEAT TO TOP OF CANVAS AT FRAME

FOOTREST INFORMATION



PRIMARY LEG TO SEAT RELATIONSHIPS

TYPES	LEG ANGLE	HEIGHT RANGE FROM SEAT(mm)
STANDARD	90° FIXED	-235 - -375

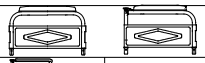
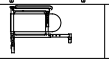


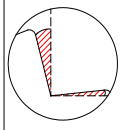
ELEV. LEG REST	120° - 180°	N/A
STUMP SUPPORT	180° FIXED	0 - +80

SWIVEL FOR SIDE TRANSFER
DETACHABLE FOR LIFTING

ARMREST INFORMATION

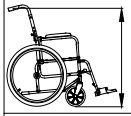
HEIGHT OF DETACHABLE ARMRESTS (mm)

UNIVERSAL AND TRAY		255
DESK ADJUSTABLE		HEIGHT RANGE 255 - 315



FRAME / SEAT ANGLE INFORMATION

BACKREST ANGLE FROM VERTICAL
10° DEGREES REARWARD

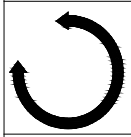


FRAME ANGLE FROM HORIZONTAL
5° DEGREES LOWER AT BACK

PUSH HANDLE HEIGHT - 940
MEASURED FROM GROUND TO CENTRE OF GRIP

CORRIDOR WIDTH TURNING SPACE

WITH ATTENDANT BEHIND



MODEL	THROUGH 180° BETWEEN WALLS
8TRLJ	1200
8TRL	1250

DATA BASED ON ISO 7176 TESTS & MEASUREMENTS ON BASIC FACTORY BUILD SPECS. WITHOUT INCLUSION OF ANY ADAPTATION. INFORMATION GIVEN IS FOR COMPARISON AND GUIDANCE, NOT A MANUFACTURING STANDARD. USER TRIAL RECOMMENDED

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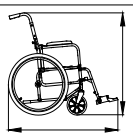
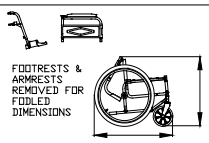
OVERALL DIMENSIONS

OVER ALL DIMENSIONS CAN BE REDUCED FROM THESE FIGURES BY REMOVAL OF QD WHEELS



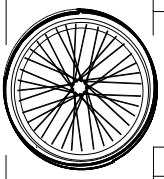


	DESCRIPTION AND SEAT WIDTH REF.	CHAIR OPEN (mm) WIDTH	LENGTH	HEIGHT	CHAIR FOLDED (mm) WIDTH	LENGTH	HEIGHT
JUNIOR MODELS	13	535	990	940	290	760	685
	15	585	990	940	290	760	685
	16	610	990	940	290	760	685
ADULT MODELS	17	635	1040	940	290	810	685
	18	660	1040	940	290	810	685

WHEEL BASE CASTORS TRAILING

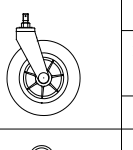
WIDTH REFERENCE	13"	18"
WHEELBASE (mm)	375 min	430 max

WHEELBASE RANGE ACCROSS ALL MODELS



REAR WHEEL INFORMATION

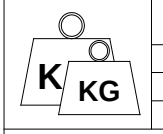
DIMENSION	Ø mm	WIDTH
SELF PROPELLED	560 ONLY	31mm PNEUMATIC
		25mm PUNCTURE FREE
TYRE	CHOICE- PUNCTURE FREE OR PNEUMATIC	



CASTOR INFORMATION

SPIGOT FITTING WITH ANGLE ADJUSTABLE MOUNTING TO SUIT SEAT TO GROUND ANGLE

PUNCTURE FREE TYRE Ø190 BY 25mm WIDE



WEIGHT INFORMATION

MEASUREMENT	TOTAL WEIGHT	LIFTING WEIGHT
ATTENDANT	18.5Kg	14.0Kg

OBSTACLES AND ENVRIONMENTS

SAFE SLOPE FOR MANUAL CHAIRS IS BASED UPON ABILITY OF OCCUPANT OR ATTENDANT TO CONTROL THE CHAIR ON A SLOPE IN ALL DIRECTIONS.	8 DEGREES

ISO 7176 IMPACT STRENGTH & DYNAMIC TESTS

TRANSPORT COMPATIBLE
CRASH TESTED AT 48Kmph/30mph
APPROVED FOR USE WITH WEBBING TIE-DOWN & OCCUPANT RESTRAINT SYSTEM (WTORS) NOT CLAMPS

200,000 CYCLES TWO DRUM
6,666 CYCLES KERB DROP

STATIC STABILITY RANGE (BRAKES ON)

MODEL AND CONFIG.	FORWARDS	BACKWARDS	SIDEWAYS
RANGER 8TRLJ 15"	13° SLIDES	15°	14°
RANGER 8TRL 17"	13° SLIDES	15°	15°

DXP335-4

Positive Momentum

TECHNICAL INFORMATION CE

RANGE **9TRL** MANUAL WHEELCHAIRS

OCCUPANT WEIGHT RANGE 50Kg TO 127Kg

KG

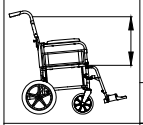
GENERAL PURPOSE FOR JUNIOR OR ADULT OCCUPANTS CONFIGURABLE TO ATTENDANT PROPULSION. FOR INDOOR AND OUTDOOR USE IN PUBLIC ACCESS AREAS. SUITABLE AS A TRANSPORT VEHICLE SEAT WITH APROVED RESTRAINTS

SEATING AREA DIMENSIONS

RANGE AND SEAT WIDTH REFERENCE NUMBER. COVERING ALL GENERIC CONFIGURATIONS	SERVICE FRAME REFERENCE inch		ISO 7176 EFFECTIVE MEASUREMENTS mm	
	WIDTH	DEPTH	WIDTH	DEPTH
9TRLJ	13	15	365	415
9TRLJ	15	16	390	440
9TRLJ	16	16	440	440
9TRL	17	17	465	465
9TRL	18	17	490	465

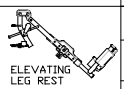
SEAT FRONT EDGE TO GROUND HEIGHT

CONFIG.	SERVICE (FRAME) REFERENCE (inch)	EFFECTIVE (CENTRE) MEASUREMENTS (mm)
9TRLJ	19	450 INCLUDING SAG
9TRL	19	450 INCLUDING SAG



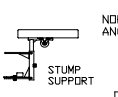
BACKREST HEIGHT - 445mm
MEASURED FROM SEAT TO TOP OF CANVAS AT FRAME

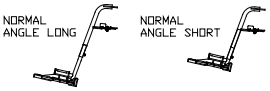
FOOTREST INFORMATION



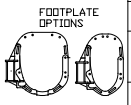
PRIMARY LEG TO SEAT RELATIONSHIPS

TYPES	LEG ANGLE	HEIGHT RANGE FROM SEAT(mm)
STANDARD	90° FIXED	-235 - -375





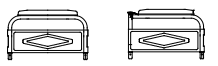
ELEV. LEG REST	120° - 180°	N/A
STUMP SUPPORT	180° FIXED	0 - +80

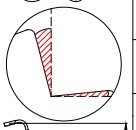


SWIVEL FOR SIDE TRANSFER
DETACHABLE FOR LIFTING

ARMREST INFORMATION

HEIGHT OF DETACHABLE ARMRESTS (mm)

UNIVERSAL AND TRAY		255



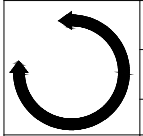
FRAME / SEAT ANGLE INFORMATION

BACKREST ANGLE FROM VERTICAL
5° TO 25° REARWARD

FRAME ANGLE FROM HORIZONTAL
5° DEGREES LOWER AT BACK

PUSH HANDLE HEIGHT - 940mm
MEASURED FROM GROUND TO CENTRE OF GRIP

CORRIDOR WIDTH TURNING SPACE



WITH ATTENDANT BEHIND

MODEL	THROUGH 180° BETWEEN WALLS
9TRLJ	1090
9TRL	1150

DATA BASED ON ISO 7176 TESTS & MEASUREMENTS ON BASIC FACTORY BUILD SPECS. WITHOUT INCLUSION OF ANY ADAPTATION. INFORMATION GIVEN IS FOR COMPARISON AND GUIDANCE, NOT A MANUFACTURING STANDARD. USER TRIAL RECOMMENDED

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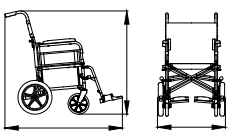
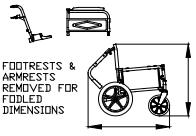
OVERALL DIMENSIONS

OVER ALL DIMENSIONS CAN BE REDUCED FROM THESE FIGURES BY REMOVAL OF QD WHEELS



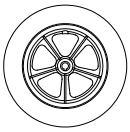


FOOTRESTS & ARMRESTS REMOVED FOR FOLDED DIMENSIONS

DESCRIPTION AND SEAT WIDTH REF.		CHAIR OPEN (mm)			CHAIR FOLDED (mm)		
		WIDTH	LENGTH	HEIGHT	WIDTH	LENGTH	HEIGHT
JUNIOR MODELS	13	535	840	940	290	610	685
	15	585	840	940	290	610	685
	16	610	840	940	290	610	685
ADULT MODELS	17	635	915	940	290	685	685
	18	660	915	940	290	685	685

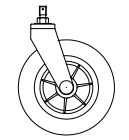
WHEEL BASE CASTORS TRAILING

WIDTH REFERENCE	13"	18"
WHEELBASE (mm)	360 min	420 max



REAR WHEEL INFORMATION

DIMENSION	Ø mm	WIDTH
ATTENDANT PROPELLED	315 ONLY	50mm
TYRE	PUNCTURE FREE	



CASTOR INFORMATION

SPIGOT FITTING WITH ANGLE ADJUSTABLE MOUNTING TO SUIT SEAT TO GROUND ANGLE

PUNCTURE FREE TYRE Ø190 BY 25mm WIDE

K KG

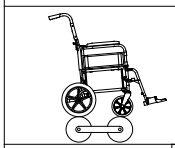
WEIGHT INFORMATION

MEASUREMENT	TOTAL WEIGHT	LIFTING WEIGHT
ATTENDANT PROPELLED	14Kg	10.5Kg

OBSTACLES AND ENVRIONMENTS

SAFE SLOPE FOR MANUAL CHAIRS IS BASED UPON ABILITY OF OCCUPANT OR ATTENDANT TO CONTROL THE CHAIR ON A SLOPE IN ALL DIRECTIONS.	8 DEGREES

ISO 7176 IMPACT STRENGTH & DYNAMIC TESTS



TRANSPORT COMPATIBLE
CRASH TESTED AT 48Kmph/30mph
APPROVED FOR USE WITH WEBBING TIE-DOWN & OCCUPANT RESTRAINT SYSTEM (WTORS) NOT CLAMPS

200,000 CYCLES TWO DRUM
6,666 CYCLES KERB DROP

STATIC STABILITY RANGE (BRAKES ON)

MODEL AND CONFIG.	FORWARDS	BACKWARDS	SIDEWAYS
RANGER 9TRLJ 15"	13° SLIDES	12°	13°
RANGER 9TRL 17"	13° SLIDES	12°	14°

DXP335-5

Positive Momentum

TECHNICAL INFORMATION CE

RANGE **SP100** MAUNAL WHEELCHAIR

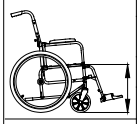
OCCUPANT WEIGHT RANGE 50Kg TO 112Kg

KG

INFORMATION GIVEN COVERS ALL OPTIONS SEE REMPLOY RECOMENDED BUILD CHART SUGGESTED COMBINATIONS OF FEATURES TO MEET A RANGE OF SPECIFIC APPLICATIONS

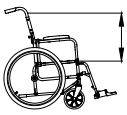
SEATING AREA DIMENSIONS

RANGE AND SEAT WIDTH REFERENCE NUMBER, COVERING ALL GENERIC CONFIGURATIONS	SERVICE FRAME REFERENCE (inch)		ISO 7176 EFFECTIVE MEASUREMENTS (mm)	
	WIDTH	DEPTH	WIDTH	DEPTH
SP100	17	17	465	465



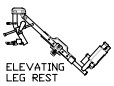
SEAT FRONT EDGE TO GROUND HEIGHT

CONFIG.	SERVICE (FRAME) REFERENCE (inch)	EFFECTIVE (CENTRE) MEASUREMENTS (mm)
SP100	17	450 including sag



BACKREST HEIGHT - 445mm
MEASURED FROM SEAT TO TOP OF CANVAS AT FRAME

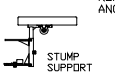
FOOTREST INFORMATION



ELEVATING LEG REST

PRIMARY LEG TO SEAT RELATIONSHIPS

TYPES	LEG ANGLE	HEIGHT RANGE FROM SEAT(mm)
STANDARD	90° FIXED	-235 - -375



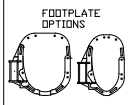
STUMP SUPPORT

NORMAL ANGLE LONG

NORMAL ANGLE SHORT

EXTERNAL CLAMP TYPE

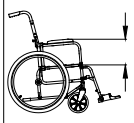
ELEV. LEG REST	120° - 180°	N/A
STUMP SUPPORT	180° FIXED	0 - +80



FOOTPLATE OPTIONS

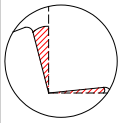
SWIVEL FOR SIDE TRANSFER
DETACHABLE FOR LIFTING

ARMREST INFORMATION



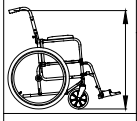
HEIGHT OF DETACHABLE ARMRESTS (mm)

UNIVERSAL AND TRAY		255
DESK ADJUSTABLE		HEIGHT RANGE 255 - 315



FRAME / SEAT ANGLE INFORMATION

BACKREST ANGLE FROM VERTICAL
10° DEGREES REARWARD

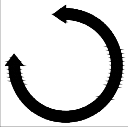


FRAME ANGLE FROM HORIZONTAL
5° DEGREES LOWER AT BACK

PUSH HANDLE HEIGHT - 940
MEASURED FROM GROUND TO CENTRE OF GRIP

CORRIDOR WIDTH TURNING SPACE

WITH ATTENDANT BEHIND



MODEL	THROUGH 180° BETWEEN WALLS
SP100	1250

DATA BASED ON ISO 7176 TESTS & MEASUREMENTS ON BASIC FACTORY BUILD SPECS. WITHOUT INCLUSION OF ANY ADAPTATION. INFORMATION GIVEN IS FOR COMPARISON AND GUIDANCE, NOT A MANUFACTURING STANDARD. USER TRIAL RECOMMENDED

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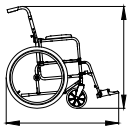
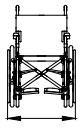
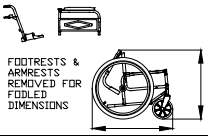
OVERALL DIMENSIONS

OVER ALL DIMENSIONS CAN BE REDUCED FROM THESE FIGURES BY REMOVAL OF QD WHEELS







FOOTRESTS & ARMRESTS REMOVED FOR FODLED DIMENSIONS

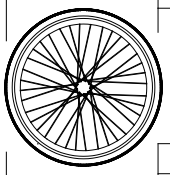
DESCRIPTION AND SEAT WIDTH REF.	CHAIR OPEN (mm)			CHAIR FOLDED (mm)		
	WIDTH	LENGTH	HEIGHT	WIDTH	LENGTH	HEIGHT
17	635	1040	940	290	810	685

WHEEL BASE CASTORS TRAILING

WIDTH REFERENCE	17"
WHEELBASE (mm)	430 max

WHEELBASE RANGE ACCROSS ALL MODELS

REAR WHEEL INFORMATION

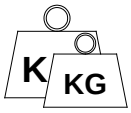


DIMENSION	Ø mm	WIDTH
SELF PROPELLED	560 ONLY	31mm PNEUMATIC
		25mm PUNCTURE FREE
TYRE	CHOICE- PUNCTURE FREE OR PNEUMATIC	

CASTOR INFORMATION

SPIGOT FITTING WITH ANGLE ADJUSTABLE MOUNTING TO SUIT SEAT TO GROUND ANGLE

PUNCTURE FREE TYRE Ø190 BY 25mm WIDE



K KG

WEIGHT INFORMATION

MEASUREMENT	TOTAL WEIGHT	LIFTING WEIGHT
ATTENDANT	18.5Kg	14.0Kg

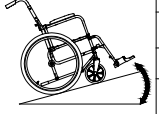
OBSTACLES AND ENVRIONMENTS

SAFE SLOPE FOR MANUAL CHAIRS IS BASED UPON ABILITY OF OCCUPANT OR ATTENDANT TO CONTROL THE CHAIR ON A SLOPE IN ALL DIRECTIONS.	8 DEGREES

ISO 7176 IMPACT STRENGTH & DYNAMIC TESTS

TRANSPORT COMPATIBLE
CRASH TESTED AT 48Kmph/30mph
APPROVED FOR USE WITH WEBBING TIE-DOWN & OCCUPANT RESTRAINT SYSTEM (WTORS) NOT CLAMPS

200,000 CYCLES TWO DRUM
6,666 CYCLES KERB DROP



STATIC STABILITY RANGE (BRAKES ON)

MODEL AND CONFIG.	FORWARDS	BACKWARDS	SIDEWAYS
SP100 17"	13° SLIDES	15°	15°

DXP335-14

Positive Momentum

TECHNICAL INFORMATION CE

RANGE **AP100** MANUAL WHEELCHAIR

OCCUPANT WEIGHT RANGE 50Kg TO 112Kg

KG

GENERAL PURPOSE FOR JUNIOR OR ADULT OCCUPANTS CONFIGURABLE TO ATTENDANT PROPULSION. FOR INDOOR AND OUTDOOR USE IN PUBLIC ACCESS AREAS. SUITABLE AS A TRANSPORT VEHICLE SEAT WITH APROVED RESTRAINTS

SEATING AREA DIMENSIONS

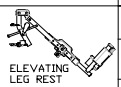
RANGE AND SEAT WIDTH REFERENCE NUMBER. COVERING ALL GENERIC CONFIGURATIONS	SERVICE FRAME REFERENCE inch		ISO 7176 EFFECTIVE MEASUREMENTS mm	
	WIDTH	DEPTH	WIDTH	DEPTH
AP100	17	17	465	465

SEAT FRONT EDGE TO GROUND HEIGHT

CONFIG.	SERVICE (FRAME) REFERENCE (inch)	EFFECTIVE (CENTRE) MEASUREMENTS (mm)
AP100	17	450 INCLUDING SAG

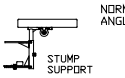
BACKREST HEIGHT - 445mm
MEASURED FROM SEAT TO TOP OF CANVAS AT FRAME

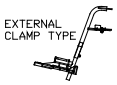
FOOTREST INFORMATION



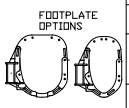
PRIMARY LEG TO SEAT RELATIONSHIPS

TYPES	LEG ANGLE	HEIGHT RANGE FROM SEAT(mm)
STANDARD	90° FIXED	-235 - -375





ELEV. LEG REST	120° - 180°	N/A
STUMP SUPPORT	180° FIXED	0 - +80



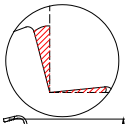
SWIVEL FOR SIDE TRANSFER
DETACHABLE FOR LIFTING

ARMREST INFORMATION

HEIGHT OF DETACHABLE ARMRESTS (mm)

UNIVERSAL AND TRAY		255

FRAME / SEAT ANGLE INFORMATION

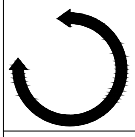


BACKREST ANGLE FROM VERTICAL
5° TO 25° REARWARD

FRAME ANGLE FROM HORIZONTAL
5° DEGREES LOWER AT BACK

PUSH HANDLE HEIGHT - 940mm
MEASURED FROM GROUND TO CENTRE OF GRIP

CORRIDOR WIDTH TURNING SPACE



WITH ATTENDANT BEHIND

MODEL	THROUGH 180° BETWEEN WALLS
AP100	1150

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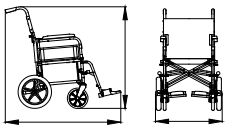
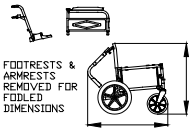
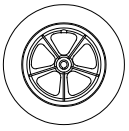




DESCRIPTION AND SEAT WIDTH REF.	CHAIR OPEN (mm)			CHAIR FOLDED (mm)		
	WIDTH	LENGTH	HEIGHT	WIDTH	LENGTH	HEIGHT
17	635	915	940	290	685	685

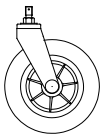
WHEEL BASE CASTORS TRAILING

WIDTH REFERENCE	17"
WHEELBASE (mm)	420 max



REAR WHEEL INFORMATION

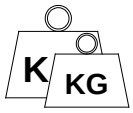
DIMENSION	ø mm	WIDTH
ATTENDANT PROPELLED	315 ONLY	50mm
TYRE	PUNCTURE FREE	



CASTOR INFORMATION

SPIGOT FITTING WITH ANGLE ADJUSTABLE MOUNTING TO SUIT SEAT TO GROUND ANGLE

PUNCTURE FREE TYRE ø190 BY 25mm WIDE



WEIGHT INFORMATION

MEASUREMENT	TOTAL WEIGHT	LIFTING WEIGHT
ATTENDANT PROPELLED	14Kg	10.5Kg

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6,666 CYCLES KERB DROP

STATIC STABILITY RANGE (BRAKES ON)

MODEL AND CONFIG.	FORWARDS	BACKWARDS	SIDEWAYS
AP100 17"	13° SLIDES	12°	14°

DXP335-15

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